CLAIMS

We claim:

1. A method for detecting antibodies capable of binding to adenovirus comprising:
   a) immobilization of a peptide capable of being bound by an anti-adenovirus antibody directly onto a flowcell of a sensorchip in a biosensor,
   b) obtaining a serum sample from a patient to be tested and contacting said serum sample with the immobilized peptide, and
   c) measuring binding of antibodies to the immobilized peptide by means of response units from said biosensor.

2. The method of Claim 1, wherein said peptide is capable of being bound by antibodies specific to adenovirus 5.

3. The method of Claim 2, wherein said serum is human serum.

4. The method of Claim 3, wherein said peptide is selected from the group consisting of:
   a) a peptide comprising SEQ ID NO: 1, or a peptide having substantial sequence identity thereto;
   b) a peptide comprising SEQ ID NO: 2, or a peptide having substantial sequence identity thereto;
   c) a peptide comprising SEQ ID NO: 3, or a peptide having substantial sequence identity thereto;
   d) a peptide comprising SEQ ID NO: 4, or a peptide having substantial sequence identity thereto;
   e) a peptide comprising SEQ ID NO: 5, or a peptide having substantial sequence identity thereto;
   f) a peptide comprising SEQ ID NO: 6, or a peptide having substantial sequence identity thereto; and

g) a peptide comprising SEQ ID NO: 7, or a peptide having substantial sequence identity thereto.

5. The method of Claim 4, wherein said peptide is selected from the group consisting of:

a) a peptide comprising SEQ ID NO: 9, or a peptide having substantial sequence identity thereto;

b) a peptide comprising SEQ ID NO: 10, or a peptide having substantial sequence identity thereto;

c) a peptide comprising SEQ ID NO: 11, or a peptide having substantial sequence identity thereto;

d) a peptide comprising SEQ ID NO: 12, or a peptide having substantial sequence identity thereto;

e) a peptide comprising SEQ ID NO: 13, or a peptide having substantial sequence identity thereto;

f) a peptide comprising SEQ ID NO: 14, or a peptide having substantial sequence identity thereto; and

g) a peptide comprising SEQ ID NO: 15, or a peptide having substantial sequence identity thereto.

6. The method of Claim 5, wherein the amount of antibody that binds to each peptide is directly proportional to said response units.

7. The method of Claim 6 wherein said response is detected using a BIACORE 2000™.

8. The method of Claim 1 further comprising a plurality of peptides capable of being bound by an anti-adenovirus antibody are directly immobilized, each on its own separate flowcell.

9. The method of Claim 8, wherein at least one of said plurality of peptides is capable of being bound by antibodies specific to adenovirus 5.

10. The method of Claim 9, wherein said serum is human serum.

11. The method of Claim 10, wherein each of said plurality of peptides are selected from the group consisting of:

a) a peptide comprising SEQ ID NO: 1, or a peptide having substantial sequence identity thereto;

b) a peptide comprising SEQ ID NO: 2, or a peptide having substantial sequence identity thereto;

c) a peptide comprising SEQ ID NO: 3, or a peptide having substantial sequence identity thereto;

d) a peptide comprising SEQ ID NO: 4, or a peptide having substantial sequence identity thereto;

e) a peptide comprising SEQ ID NO: 5, or a peptide having substantial sequence identity thereto;

f) a peptide comprising SEQ ID NO: 6, or a peptide having substantial sequence identity thereto; and

g) a peptide comprising SEQ ID NO: 7, or a peptide having substantial sequence identity thereto.

12. The method of Claim 11, wherein said peptide is selected from the group consisting of:

a) a peptide comprising SEQ ID NO: 9, or a peptide having substantial sequence identity thereto;

b) a peptide comprising SEQ ID NO: 10, or a peptide having substantial sequence identity thereto;

c) a peptide comprising SEQ ID NO: 11, or a peptide having substantial sequence identity thereto;

d) a peptide comprising SEQ ID NO: 12, or a peptide having substantial sequence identity thereto;

e) a peptide comprising SEQ ID NO: 13, or a peptide having substantial sequence identity thereto;

f) a peptide comprising SEQ ID NO: 14, or a peptide having substantial sequence identity thereto; and

g) a peptide comprising SEQ ID NO: 15, or a peptide having substantial sequence identity thereto.

13. The method of Claim 12 wherein the serum sample is simultaneously contacting with a plurality of immobilized peptides.

14. The method of Claim 13 wherein the amount of antibody that binds to each peptide is directly proportional to said response units.

15. The method of Claim 14 wherein said biosensor is a BIACORE 2000™.

16. A method for detecting antibodies capable of binding to adenovirus, comprising a peptide selected from the group consisting SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7 or a peptides having substantial sequence identity thereto.

17. The method of Claim 16, wherein said method of detecting comprises an ELISA system.

18. The method of Claim 17, further comprising a plurality of peptides capable of being bound by an anti-adenovirus antibody.

19. A composition of matter comprising SEQ ID No. 8 or a peptide having substantial sequence identity thereto.

20. The use of the composition of matter of Claim 19 in a biosensor based assay to detect antibodies.